



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

ATLANTA FEDERAL CENTER
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ATLANTA, GEORGIA 30303-8960

October 5, 2015

Mr. Gary D. Goeke
Chief, Environmental Assessment Section
Leasing and Environment (MS 5410)
Bureau of Ocean Energy Management (BOEM)
1201 Elmwood Park Boulevard
New Orleans, LA 70133-2394

Subject: EPA Review Comments on the BOEM's FSEIS for "Gulf of Mexico Outer Continental Shelf (OCS) Oil and Gas Lease Sales: 2016-2017 Central Planning Area Lease Sales 241, 247 and Eastern Planning Area Lease Sale 226"; CEQ #20150249

Dear Mr. Goeke:

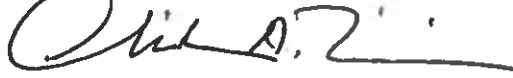
The U.S. Environmental Protection Agency (EPA) has reviewed the subject Bureau of Ocean Energy Management (BOEM) Final Supplemental Environmental Impact Statement (FSEIS) in accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. It is our understanding that BOEM proposes lease sales in the Gulf of Mexico (GOM) Outer Continental Shelf (OCS) for lease blocks in the Central Planning Area and the Eastern Planning Area. The proposed action covers lease sales of blocks 241 and 247 in the Central Planning Area and lease sale block 226 in the Eastern Planning Area. The EPA understands that these lease sales are considered Federal actions that trigger NEPA and that this FSEIS will update baseline conditions and potential environmental effects of oil and gas leasing, exploration, development, and production in the Central and Eastern Planning Areas since publication of the last NEPA documents addressing activities in these areas.¹

The EPA reviewed and commented on the Draft Supplemental Environmental Impact Statement (DSEIS) for this proposed action in a letter dated March 16, 2015. Our primary environment concerns listed in our letter on the DSEIS were related to potential impacts to air quality, coastal ecosystems, wetlands, mitigation, and level of detail provided in the document. We acknowledge the BOEM's efforts to include a dedicated section in the FSEIS which includes specific responses to our comments. We have focused our review of the FSEIS on the BOEM's specific responses to the DSEIS comments (Section 5.12). The EPA's detailed comments on the FEIS are provided in the attachment to this letter.

¹ p. v of the FSEIS

The EPA requests that the BOEM provide specific responses in the Record of Decision (ROD) to our outstanding environmental concerns, including issues associated with Greenhouse Gas (GHG) emissions and climate change. We also request that the BOEM provide the EPA with a copy of the final signed ROD. Should the BOEM have questions regarding our comments, please feel free to contact Mr. Dan Holliman of my staff at 404/562-9531 or holliman.daniel@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris A. Militscher", with a long horizontal flourish extending to the right.

Christopher A. Militscher
Chief, NEPA Program Office
Resource Conservation and Restoration

Attachment: Detailed Comments

**ATTACHMENT: DETAILED COMMENTS
ON THE FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT
(FSEIS) FOR THE U.S. DEPARTMENT OF THE INTERIOR, BUREAU OF OCEAN
ENERGY MANAGEMENT (BOEM) GULF OF MEXICO OUTER CONTINENTAL
SHELF (OCS) OIL AND GAS LEASE SALES: 2016-2017 CENTRAL PLANNING AREA
LEASE SALES 241, AND 247 AND EASTERN PLANNING AREA LEASE SALE 226**

The EPA reviewed and commented on the Draft Supplemental Environmental Impact Statement (DSEIS) in a letter dated March 16, 2015. Our primary environmental concerns listed in our letter on the DSEIS were related to potential impacts to air quality, coastal ecosystems, wetlands, mitigation, and the level of detail provided in the document.

ALTERNATIVES

In our DSEIS comments, EPA supported Alternative B, since it excluded unleased blocks near biologically sensitive topographic features. In response to comments, the BOEM states that the supplemental EIS is not a 'decision document'. The EPA understands that the EIS is not a decision document, however, we continue to support Alternative B because it is the most environmentally protective Alternative presented in the EIS.

AIR QUALITY

The EPA is responsible for ensuring compliance with the National Ambient Air Quality Standards (NAAQS) in the Gulf States of Texas, Louisiana, Mississippi, Alabama and Florida. In addition, the EPA Region 4 office is also responsible for implementing and enforcing Clean Air Act (CAA) requirements for Outer Continent Shelf (OCS) sources offshore of the state to the seaward boundaries of all areas of the Gulf of Mexico (GOM) east of 87°30" (*see* CAA section 328). Pursuant to the CAA and applicable Federal regulations (*see* 40 CFR 55), OCS activities, such as exploratory drilling operations and production platforms, are subject to the EPA's requirements to obtain air quality preconstruction and operating permits.

The EPA provided comments on the DSEIS related to emissions inventory, air quality analysis, use of the OCD model, and model receptors. The air quality sections of the FSEIS were specifically reviewed by EPA's Air, Pesticides, and Toxics Management Division (APTMD). In general, the BOEM acknowledged our comments and indicated they would consider addressing the EPA's environmental concerns in future studies or NEPA actions, but did not specifically address our concerns in the current document. Hence, our environmental concerns remain essentially unchanged from the DSEIS (See Air comments in the March 9, 2015, EPA Comment Letter). Based upon our review of the BOEM's responses to our comments we provide the following responses:

- The referenced analyses predict modeled emission results above the EPA significant impact level (SIL) for the annual NO₂ standard and the standard for 24-hour particulate matter of 2.5 microns or less (PM_{2.5}). The EPA continues to recommend that exceedance of a SIL warrants more refined analysis be conducted to validate the BOEM conclusions that the proposed actions are projected to have minimal air quality impacts.
- The EPA continues to have environmental concerns that emissions from well stimulation vessels were not included in the FEIS. The EPA recommends that emissions inventory

and analyses should include all emissions activities currently in use and expected to result from the 2016-2017 lease sales.

- The EPA continues to recommend that the BOEM develop measures to monitor and mitigate NAAQS pollutants, such as NO_x, and PM_{2.5}, as well as greenhouse gases (GHG), and to include recommendations for these measures in the Record of Decision (ROD). The EPA suggests that reasonable mitigation measures that should be considered include the use of low-sulfur fuels, including liquefied natural gas, inherently lower polluting engine designs, use of required tier certified non-road and marine engines (rather than engines certified for export), and electrification of cranes and support equipment.
- The EPA continues to believe that the transport distances used in the FSEIS air quality analysis are beyond the stated reliable limits of the OCD model. The BOEM's response to comments indicated that AERMOD-AERCOARE has been approved for use in the Arctic, and the BOEM would prefer to use this model in the GOM. While AERMOD-AERCOARE has advantages when offshore Meta data is not available, such as in the Arctic, this model is also not designed for long-range transport. The development in the Arctic is relatively near-shore when compared to the distances in the GOM which increasingly exceeds 50 kilometers (km).
- The EPA continues to have concerns that the BOEM located modelling receptors solely onshore and did not include any receptors at the State's seaward boundary. The scope of the NEPA analysis should not be limited to the plan review requirements of 30 CFR 550.303. The EIS also serves as a document to allow decision-makers to discern compliance with applicable statutes and regulations, including the requirements of the Outer Continental Shelf Lands Act (OCSLA), the CAA, the Coastal Zone Management Act (CZMA), and the NAAQS within state seaward boundaries. As indicated in the EPA's comments on the DSEIS, this near-shore area is subject to state attainment planning, is the area located closest to the lease sale blocks, and is located in an area of human activity including recreational and commercial boating and fishing. Therefore, information from the BOEM regarding the impacts at the states seaward boundary is critical for the States to ensure this near shore area is in compliance with the NAAQS, as well as with the CZMA. In addition, the OCSLA also refers to impacts on "the air quality of any State." It is the EPA's understanding that the State jurisdiction extends, by statute, to the state seaward boundary (3 or 9 miles from the shore). The EPA continues to recommend that the BOEM include receptors at the state seaward boundary in NEPA analyses to ensure that the NAAQS are protected and that the air quality within this area is not adversely impacted by OCS activity.

GHG EMISSIONS AND CLIMATE CHANGE

The EPA notes that the original draft EIS, on which the supplement is based, includes an estimate of GHG emissions (CO₂, methane and nitrous oxides) from the 2008 emissions inventory (Appendix G) and Federal GHG reporting rule inputs. The 2015-2017 supplement updates this information using the 2011 emissions inventory contained in Appendix A. The EPA acknowledges that these documents are incorporated by reference into this updated 2016-2017 FSEIS. The EPA could not identify any new air quality analysis that was prepared for this supplement pertaining to GHG emissions and climate change. The previous GHG estimates were based on fuel use data and direct emissions of methane from the well head. The EPA

acknowledges that these are acceptable estimation methods. The EPA identified in Appendix G the section on *Considerations of Climate Change and the Baseline Environment*, pages G-13 to G-18. The FSEIS identifies numerous potential effects from increased GHG emissions and climate change effects, including ocean acidification, species composition, coral reef damage, permafrost thawing, increases in major storm frequency and intensity, sea level rise and coastal erosion. The EPA notes that most reference studies in this section of the FSEIS are mostly from the International Panel on Climate Change (IPCC) from 2005 to 2009 and the FSEIS has not been updated on more recent studies. Additionally, the Council on Environmental Quality (CEQ) issued guidance in December of 2104 that should be considered by the BOEM for potential mitigation and/or adaption measures in the ROD. Please see:

https://www.whitehouse.gov/sites/default/files/docs/nepa_revised_draft_ghg_guidance_searchable.pdf.

ODMDS (Ocean Dredged Material Disposal Site)

In our comments on the DSEIS, the EPA provided clarifying language related to the discussion related to ODMDS in the GOM. In response to our comments the BOEM provided updated language/data for the ODMDS section of the FSEIS. The EPA has no additional comments.

WETLANDS AND COASTAL AREAS

In the EPA's comments on the DSEIS, we expressed our environmental concern for potential cumulative impacts on near-shore wetlands and coastal areas. The BOEM stated in their response to comments that they will continue to update data and information relevant to wetlands cumulative impacts in their EISs. In addition, the EPA also notes that additional references are included in the FSEIS related to the current conditions and sources of impacts for coastal wetland systems. The EPA has no additional comments.

CWPPRA (Coastal Wetlands Planning, Protection and Restoration Act)

In our comments on the DSEIS, the EPA referred the BOEM to the Coastal Protection and Restoration Authority of Louisiana publication: "*Louisiana's Comprehensive Master Plan for a Sustainable Coast*" Master Plan for 2017. The BOEM indicated in their response to comments that they would not address the new 2017 plan in their EISs until it becomes final. Additionally, the EPA provided information about the CWPPRA decision-making process, the current number of CWPPRA projects, and how completed projects are providing benefits. The BOEM provided additional language in the FSEIS that addresses our comments. The EPA has no additional comments.

SEAGRASS / ISLAND RESTORATION

In our comments on the DSEIS, the EPA provided comments on monitoring and protection strategies for seagrass communities and supported the BOEM's efforts to identify resources for coastal restoration efforts. The EPA has no additional comments.

NPDES

In the EPA's comments on the DSEIS, we recommended information on the trends pertaining to the volumes of well stimulation fluids used in well development, any available information on the formulation of these fluids, and their fate and transport be included in the FSEIS. We also

recommended that the BOEM provide information relating to how 'fracking' is different from traditional well development:

- * Will special vessels for fracking-related operations be needed?
- * How do these vessels impact the BOEM's impact analysis relating to vessel traffic?

Additionally, we recommended that the BOEM studies related to well stimulation activities be cited in the FSEIS. The EPA acknowledges the BOEM's efforts to respond to our comments in the FSEIS. The EPA has reviewed the additional information provided in the FSEIS. We continue to have environmental concerns that the information on the trends pertaining to the volumes of well stimulation fluids used in well development, any available information on the formulation of these fluids, and their fate and transport is lacking in the EIS. We also note that one of the studies cited is based on data collected in the Middle East and Asia. It is not clear to the EPA how relevant this information is to the GOM. This should be clarified in the ROD.

ENVIRONMENTAL JUSTICE

In our comments on the DSEIS, the EPA recommended that the BOEM include the results of the referenced subsistence fishing study be included in the FSEIS. The EPA notes that the BOEM has not yet completed the study. However, the FSEIS has included a link to the online profile of the study. EPA acknowledges the additional information provided and looks forward to the study results being included in future EISs and the ROD.